## Texas Board of Professional Engineers Engineering For A Better Texas

1917 S Interstate 35 Austin, Texas 78741-3702 512-440-7723 http://engineers.texas.gov

August 22, 2019

Mr. Lawrence Peeler, P.E. Peeler Engineering, P.L.L.C. 9518 Fallbrook Drive Dallas, TX 75243-6150

Re: Formal Response to Request for Policy Advisory Request Regarding Design and Evaluation of Residential Foundations

Dear Mr. Peeler:

The Texas Board of Professional Engineers (Board) met in public session on August 22, 2019, and approved this response to your original request, dated July 31, 2017, and follow-up request dated March 19, 2019. The delayed response is due to Board staff's misunderstanding that your original request was formally withdrawn in August 2017.

## **Scenario:**

You seek guidance on the following issue:

For residential slab systems, is it appropriate to convert slab-on-ground systems to structurally suspended systems?

For background, you state that in your experience, it is not uncommon for a professional engineer to propose to repair post-tensioned residential slab-on-ground foundations by installing underpinning piers, then elevating the entire foundation and structure above the ground. By undertaking these steps, the foundation is converted from a slab-on-ground foundation system to a structurally suspended slab system. In your view, slab-on-ground foundation systems are not properly reinforced to function as a suspended slab and their conversion to a suspended slab system is not consistent with established building codes. Specifically, the International Residential Code through reference to the Post-Tensioning Institute and American Concrete Institute codes state that structural plain concrete is limited to members that are continuously supported by soil. By converting a slab-on-ground foundation to a suspended slab foundation, the necessary design element of continuous support by soil is eliminated. In your opinion, an engineer who endorses such a repair, as evident by placing his or her seal on the plan, is creating a misleading impression to the public by recommending a repair that is not consistent with established building codes.

## **Response:**

The Policy Advisory Opinion process allows the Board to issue interpretations of the Texas Engineering Practice Act (the Act) and Board Rules to address specific questions. The committee reviewed this request and determined that it does not properly fall within the Policy Advisory Opinion process.

Subchapter M of the Act establishes the Advisory Opinion Process. Specifically, the Advisory Opinion process is in place to provide an interpretation of the Act or the application of the act to a person regarding a specified existing or hypothetical factual situation. This request asks the Board to provide an opinion on the International Residential Code which is developed and under the authority of International Code Council.

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While the Act established expectations regarding the practice of engineering, it does not provide guidance for the interpretation or modification of third-party standards. However, Board Rule §137.63(b)(1) does require a professional engineer to meet all of the applicable professional practice requirements of federal, state, and local statutes, codes, regulations, rules, ordinances or standards of engineering services. The International Residential Code would fall under the codes that engineers are expected to meet in order to be compliant with Board Rule §137.63(b)(1). However, it is not appropriate for the Board to form a wholesale opinion on a broad issue within the International Residential Code as the specifics of each case would contribute to the formation of the opinion.

If you feel an engineer is violating the Act or Board rules, a complaint may be filed, and Board staff will investigate the details of the specific complaint. For more information on filing a complaint, please refer to the Board's website.

However, as you feel that the conversion of slab-on-ground foundations to suspended slabs in the North Central Texas area is widespread and in possible violation of the International Residential Code, , the Board will forward your concerns to the International Code Council, developer of the International Residential Code, for its consideration about the need to update or clarify the code to address your concerns.

## **Conclusion:**

No new Policy Advisory Opinion will be developed for this request.

Thank you for your support of the policy advisory opinion process. If you have any questions, please contact Mr. Michael Sims, P.E., Director of Compliance & Enforcement, at (512) 440-7723.

Sincerely,

Lance Kinney, P.E. Executive Director

LK:MZS:asm